

**WHAT IS CLAIMED IS:**

1. A DNA segment encoding a human type  $\alpha$  PDGF receptor protein.
2. A DNA segment according to claim 1, wherein said segment comprises genomic clone T11 or cDNA clone TR4.
3. A DNA segment, according to claim 1, wherein said protein has the amino acid sequence defined in Figure 3.
4. A recombinant DNA molecule comprising a DNA segment according to claim 1 and a vector.
5. A culture of cells transformed with a DNA segment according to claim 1.
6. A method of producing a human type  $\alpha$  PDGF receptor protein comprising culturing cells according to claim 5 under conditions such that said protein is produced and isolating said protein from said cells.
7. A human type  $\alpha$  PDGF receptor protein having the amino acid sequence defined in Figure 3.
8. An antibody specific for a protein having the amino acid sequence of a type  $\alpha$  human PDGF receptor protein, according to claim 7.
9. An antibody according to claim 8, wherein said antibody is specific for only a type  $\alpha$  PDGF receptor protein.
10. An antibody specific for a protein having the amino acid sequence of a type  $\beta$  human PDGF receptor protein, wherein said antibody is specific for only a type  $\beta$  human

PDGF receptor protein.

11. A bioassay for expression of a type  $\alpha$  PDGF receptor gene comprising the steps of:
  - i) contacting a biological sample suspected of containing RNA with a DNA probe comprising a DNA segment according to claim 1, under conditions such that a DNA:RNA hybrid molecule containing said DNA probe and complementary RNA is formed; and
  - ii) determining the amount of said DNA probe present in said hybrid molecules.
  
12. A bioassay for a type  $\alpha$  PDGF receptor antigen comprising the steps of:
  - i) contacting a biological sample suspected of containing polypeptides with an antibody according to claim 8, under conditions such that a specific complex of said antibody and said antigen is formed; and
  - ii) determining the amount of said antibody in said complexes.
  
13. A bioassay for type  $\beta$  PDGF receptor antigen comprising the steps of:
  - i) contacting a biological sample suspected of containing polypeptides with an antibody according to claim 10, under conditions such that a specific complex of said antibody and said antigen is formed; and
  - ii) determining the amount of said antibody in said complexes.